ZOROTYPUS LONGICERCATUS, A NEW SPECIES OF ZORAPTERA FROM JAMAICA.[1]

By A. N. Caudell.

Among miscellaneous material recently submitted by the Federal Horticultural Board for determination were two small whitish termite-like creatures which proved to represent a very distinct species of *Zorotypus*. It is such finds as these which now and then reward the specialist for hours devoted to naming material taken at quarantine. These specimens were intercepted at Philadelphia from Jamaica, the label accompanying them reading as follows:

> "In soil about palm plants (taken from officer) from Jamaica. Intercepted at Philadelphia, Pa., April 27, 1927, by A. G. Barley. Philad. No. 5565."

It is unfortunate that both specimens are immature, being larvae with eight segmented antennae. But the characters are so strikingly different from any described form that there is no hesitation in describing them as a new species. The specific name chosen has reference to the conspicuously elongated cerci, a character which at a glance differentiates them from all other described species of these little known insects.

Zorotypus longicercatus, new species.

Description.—Larva. General color, dull translucid whitish, the alimentary canal shadowly visible through the body walls; head with a narrow lighter colored line extending from one minute black eye to the other and bowing semicircularly towards the base of the occiput. Body and limbs with a few short, fine, brownish hairs, those of the cerci similar to those on the body, but somewhat longer.

Head very much broader than the pronotum. Eyes represented by a very minute black dot on each side of the head; ocelli none. Apical segment of palpus about twice as long as broad, slightly longer than the preceding segment and much thicker, apically narrowing to a point. Antennae thick and heavy, as is characteristic for the genus, and consisting of eight segments, the number indicative of the larval condition; the basal segment decidedly longer than broad, gradually thickening apically; second segment subequal in diameter with the adjacent portions of the preceding and succeeding segments and scarcely longer than wide and about one-half as long as the basal segment; third segment approximately three times as long as broad, subequal in length to the basal and second segments together and about three times as long as the second alone; basally the third segment is broadly attached to the second segment, but the juncture between its apex and the fourth segment, as are the points of attachment of all succeeding segments, is very narrow; fourth segment

[1]Since the above manuscript was written there has been received a single anterior wing of a species of Zorotypus from Cuba, found in a vial with an earwig submitted for determination. This is the first record of this Order from Cuba and except for the new species here described, the first from the West Indies.

somewhat longer than thick, mesally as thick as the thickest portion of the third segment and tapering to a point at each end; fifth, sixth and seventh segments very like the fourth; eighth, and last, segment similar to the preceding except somewhat more elongate. Figure 1 shows one of the antennae greatly enlarged.

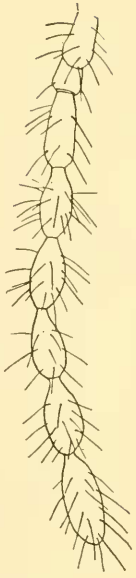

Fig. 1.

Pronotum as broad as long, about two-thirds as broad as the head, posteriorly noticeably narrowing, the anterior margin broadly convex, the posterior margin almost straight and the lateral margins very gently convex, the angles rounded; mesonotum slightly transverse, a little shorter than the pronotum and about as broad as the anterior width of that segment, the anterior margin concealed beneath the pronotum, the hind margin very gently concave and the lateral margins parallel but decidedly convex; metanotum decidedly transverse, about as long as the mesonotum and anteriorly subequal to it in width but posteriorly very decidedly broader, the lateral margins convex and the posterior margin broadly and shallowly concave.

Legs short and stout, all the femora very noticeably swollen and about equally so; the posterior femora are without heavy chitinous ventral spines, such spines as are present being brownish colored and so minute as to be scarcely discernible under moderately high magnification.

Abdomen anteriorly somewhat narrower than the metanotum but becoming broader posteriorly. Cerci strikingly different from those of any other known form in being about five times as long as their greatest width, gradually tapering to a point and each bearing several fine, pale colored hairs much less than one-half the length of the cercus and without a principal apical seta as present in most described forms. Figure 2 shows the cerci much enlarged.

Measurements.—Length, antenna, 1.1 mm.; posterior femora, .4 mm.; cercus, .4 mm.

Holotype, larva, Jamaica, 1927, in soil about palm plants, preserved in spirits; paratype, same data, mounted on a slide.

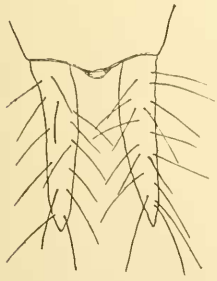

Fig. 2.

Type material in collection of U. S. National Museum.

Catalogue No. 40496, U. S. N. M.

This species runs out in the published key[1] to *snyderi* but the long cerci will at once differentiate it from that species as well as from all other described forms. The cerci of *Zorotypus guineensis* Silv. is about twice as long as basally broad but in all other previously described species it is scarcely longer than broad; thus the cerci of the species here erected, being as long as the posterior femora, or several times as long as the basal thickness, will separate this form at a glance from all other described species.

[1]Trans. Amer. Enc. Soc., vol. xlvii, p. 135 (1922).

THE OCCURRENCE OF PROTURANS IN WESTERN NORTH AMERICA.

By H. E. Ewing, *Bureau of Entomology, U. S. Department of Agriculture.*

While on a recent visit to the Yosemite Valley, California, in company with my brother, Dr. Fred Ewing, a small amount of decaying leaves and twigs, heavily infested with minute insects, was obtained. The leaves and twigs were picked up from the north side of the floor of the valley, a short distance east of the Yosemite Falls. They were sent by post to Mr. H. S. Barber at Washington, D. C., who placed the material in a "Berlese trap" and obtained thereby a large number of minute insects and other arthropods. Among these were two species of Protura.

The distribution of the Nearctic Proturans has been previously discussed by the writer.[1] It is sufficient here to state that up to the present no record of them occurring west of the Rocky Mountains has been obtained. Of these two species from the Yosemite one is new, and the other has not been previously reported from America.

Eosentomon yosemitensis, new species.

Head decidedly rounded laterally, about one and a half times as broad as long. Pseudoculi not conspicuous. Rostrum short. Mandibles extending to about the tip of rostrum.

Thorax very poorly chitinized, whitish; apodemes very little developed. Prothorax much reduced, with four dorsal setae arranged in a transverse row. Each of the thoracic spiracles with an anterior and a posterior seta situated at the outer border of the chitinous rim.

Abdomen slightly yellowish. Appendages on the ventral sides of the first three segments large and subequal. Eighth abdominal segment fully twice as broad as long, with about a dozen dorsal setae arranged in two irregular rows. Segments IX–XI together about as long as VIII. Telson with angulate posterior margin.

Legs rather weak and slender, in keeping with the slender body. Claw of first leg but little flattened and very pointed. Tarsus I a third longer than tibia I, without dorsal sense seta and with no terminal seta approximating the claw in thickness. Legs II and III subequal, with similar, sharp claws, each of which bears a seta-like tooth at the base.

Length when extended nearly to maximum, 0.96 mm.; width at metathorax, 0.06 mm.

Type locality.—Yosemite Valley, California.

Type.—Cat. No. 40485, U. S. N. M.

Described from a single female specimen taken by means of

[1]Ewing, H. E. Nearctic Proturans. Science, Vol. LV, No. 1435, June 30, 1922.